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Chronic Abdominal Pain: Not Always Irritable Bowel Syndrome

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KEY WORDS: chronic abdominal pain; irritable bowel syndrome; small bowel carcinoma; diagnostic delay.

CASE REPORT

A 56-year-old man was admitted to the emergency department in July 2003, with a 4-day history of worsening abdominal pain and clinical signs of small bowel obstruction.

Three years earlier, he was diagnosed with irritable bowel syndrome fulfilling Rome II criteria. At that time, he complained of abdominal pain and alternating constipation and diarrhea, with constipation predominating. A colonoscopy was completely normal and revealed a normal-appearing terminal ileum. A high-fiber diet was started and the symptoms improved. In the time to come, he experienced similar episodes of mild to moderate abdominal pain, which was more and more unresponsive to different treatment modalities (anticholinergic and antispasmotic agents, prokinetics, and antidepressants). In February 2003, the pain episodes started to occur more frequently. The pain was more often located in the right lower quadrant than in any other site. Occasionally, the pain did awaken the patient from sleep. The patient experienced worsening constipation interrupted with brief periods of diarrhea. In contrast to earlier days, evacuation did not lead to relief of pain anymore. Two months later, a small bowel enteroclysis showed localized thickening of the ileal wall, which was interpreted as Crohn's disease. Abdominal plain films showed no dilatation of the small bowel. Although repeated endoscopic and histologic evaluation of the colon and terminal ileum revealed no signs of inflammatory bowel disease, treatment with mesalamine was started. The patient experienced some improvement of symptoms.

On admission in July 2003, the patient presented with sharp, periumbilical pain and emesis. On physical examination, there was abdominal distention and diffuse tenderness to percussion, but peritoneal signs were absent. Laboratory studies revealed mild leukocytosis. Abdominal plain films demonstrated dilated loops of small bowel with air–fluid levels. Computed tomography (CT) diagnosed a short, but circumferential thickening of the terminal ileum and slightly enlarged lymph nodes of the nearby mesentery (Figure 1). Diagnostic laparoscopy showed a tumor of the ileum 40–50 cm proximal to the ileocecal valve. Laparoscopic assisted segmental resection of the ileum was performed (Figure 2). Final pathology revealed an ulcerating, moderately differentiated adenocarcinoma with infiltration of the subserosa. None of the 21 adjacent lymph nodes showed tumor infiltration. The patient experienced an uneventful recovery. When last seen in April 2004, he was disease free.

DISCUSSION

Primary small bowel malignant tumors are rare and constitute 1–3% of all malignancies of the gastrointestinal tract. The peak incidence occurs in the sixth and seventh decades of life. As with colorectal tumors, they are more prevalent in the developed world (1). Forty percent of small bowel tumors are adenocarcinomas, 40% are carcinoids, 15% are sarcomas (gastrointestinal stromal tumors), and <5% are lymphomas. Small bowel adenocarcinomas are most commonly located in the duodenum, followed by the jejunum, and the ileum (1). Despite the fact that the duodenum contributes only 4% of the total length of the small bowel, 50% of the tumors occur in this region. An adenoma–carcinoma sequence has been described in the small bowel as in the colon (2). Association of small bowel cancer with tubular or villous adenoma in the small bowel is well established (3).

Many patients with small bowel carcinoma are asymptomatic until the tumor has spread beyond the stage of surgical cure. If symptomatic, the most frequent presenting signs are uncharacteristic abdominal pain, followed by vomiting, weight loss, bleeding, and small bowel obstruction. Despite the fact that most patients are symptomatic, the typical presentation consists of a combination of nonspecific and vague findings that do not immediately alert the physician to the possibility of a small bowl malignancy. Nevertheless, early detection and treatment are the most significant variables for outcome in small bowel

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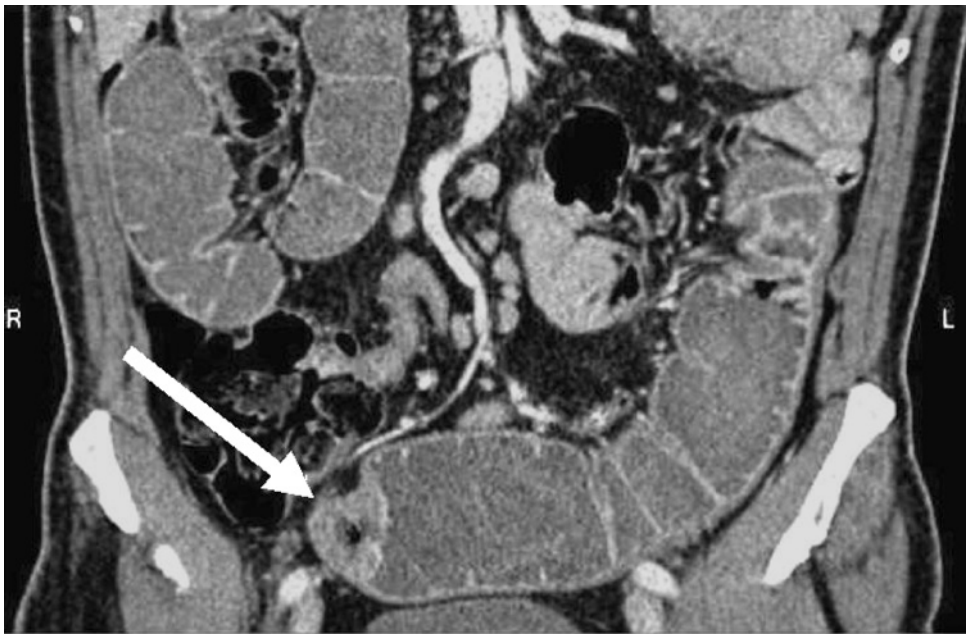

Fig 1. Abdominal CT showing circumferential thickening of the terminal ileum.

Fig 2. Surgical specimen.

carcinoma. Laboratory studies are of little help in the diagnosis of small bowel carcinoma, especially in patients with early disease. Several radiographic investigations are available for patients suspected of having a small bowel tumor. Enteroclysis has shown to be a sensitive tool for assessing mucosal and intraluminal abnormalities beyond the ligament of Treitz (4). CT offers some advantages over small bowel studies. Gross metastatic and extraluminal disease can be detected (5). Enteroclysis and CT, however, should be seen as complementary. A new technique, CT enteroclysis, combines the benefit of cross-sectional CT scanning and small bowel studies. Enteroscopy provides an alternative to radiographic evaluation, and should be considered when radiographic diagnostic studies are unrevealing. Visualization of the small bowel with capsule endoscopy may help to diagnose a small bowel tumor. However, the few existing data presently do not support the use of this technique in the routine workup of uncharacteristic abdominal pain or other vague symptoms (6). Despite a complete diagnostic workup, the correct diagnosis of small bowel carcinoma is established preoperatively in only 50% of cases (7, 8). The mainstay of treatment of small bowel carcinoma remains wide segmental resection.

The overall 5-year disease-specific survival is 30% with a median survival of close to 20 months. The overall survival from primary malignancies of the small bowel has not changed significantly over the last decades (9). This is generally ascribed to the delay in establishing the diagnosis at an earlier stage of the disease. The average duration of symptoms prior to resection is reported to be as high as 12 months (10). Surprisingly, the delay in diagnosis is mainly after medical help is sought and not from onset of symptoms to first medical consultation. Difficult accessibility of the small bowel to visualization and biopsy contribute to the late diagnosis and therefore to advanced disease with poor prognosis. In our patient, a small bowel enteroclysis showed localized thickening of the ileum that was misinterpreted as Crohn's disease. Complementary CT may have led to an earlier diagnosis.

In conclusion, worsening of long-standing chronic abdominal pain is an alarming symptom. The physician should always consider the small bowel as a potential source and take the necessary steps to correctly diagnose disease of the small intestine.

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